

IN THE
United States
Circuit Court of Appeals
For the Ninth Circuit.

WARREN BROTHERS COMPANY,
Plaintiff-Appellant,
vs.
C. M. THOMPSON et al.,
Defendants-Appellees.

REPLY MEMORANDUM FOR PLAINTIFF-
APPELLANT.

J. M. HEAD,
HARRISON F. LYMAN,
Of Counsel for Plaintiff-Appellant.

PAUL S. HONBERGER,
O. L. EVERTS,
Solicitors for Plaintiff-Appellant.

No. 4036.

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Reply Brief for Plaintiff-Appellant.

Pursuant to leave granted at the argument we file this brief in reply to certain contentions made in defendants' brief.

As a general comment on defendants' brief we may remark that, while not abandoning the position that in defendants' pavement there is no true blend between the upper and the lower course, which seems to us the controlling question in the case, defendants nevertheless make this point secondary and rely rather upon a series of arguments as to the interpretation of the patent, which, if they were sound, would mean that defendants' pavement does not infringe even if the two courses are blended as

described in the patent. These arguments, if correct, would mean that the claim of the patent is so limited in scope that it is not embodied in the Type B pavement (60 miles of which were laid by Fresno County under plaintiff's license, and which was treated by both parties at the trial of the case as an embodiment of the patented construction), that it is not embodied in the 18,000,000 sq. yds. of similar pavement which have been laid all over the country, either by the plaintiff or under the plaintiff's license, and which everyone has heretofore considered to be the patented construction, and indeed that the very pavement illustrated in the drawing of the patent does not fall within the claim, all as we shall point out more in detail below. Clearly such a limiting construction has every presumption against it and should not be adopted unless clearly necessary.

The true point of approach to a patent case was well stated by the Supreme Court, speaking through Taft, C. J., in the recent case of *Eibel Process Co. vs. Minnesota & Ontario Paper Co.*, 261 U. S. 45, 63. The Court there said, tersely restating what has been often said in other cases:

"In administering the patent law the Court first looks into the art to find what the real merit of the alleged discovery or invention is and whether it has advanced the art substantially. If it has done so, then the Court is liberal in its construction of the patent to secure to the inventor the reward he deserves."

In the *Eibel* case the invention consisted in giving the wire of a paper-making machine a “substantial” downward pitch. The wires of the prior art had been pitched downwardly but only to a comparatively slight extent—. 3 inches as against the 12 inches or so which Eibel proposed, and for a different purpose. The language of the claims was susceptible to an interpretation which would have excluded the defendant’s machine, and in fact the Court of Appeals for the First Circuit had thought it impossible to adopt any other interpretation (274 Fed. 540); but the Supreme Court, finding that Eibel had really advanced the art of paper-making, and applying the principle above set forth, adopted an interpretation which would protect the real invention, applying, as it said (261 U. S. 63) “the rule *‘ut res magis valeat quam pereat,’* which has been sustained in so many cases in this Court,” and held the claims infringed.*

*Incidentally we note that the defendants’ brief in the District Court quoted extensively from the opinion of the Court of Appeals for the First Circuit, which had not then been reversed by the Supreme Court, and that defendants’ brief in this Court makes no mention of the case, but continues to use, as its own, language taken from the opinion in the First Circuit, now reversed, in connection with the argument that if the Wallace patent is construed to cover a pavement in which the lower course receives any rolling at all, however nominal, the patent is void for indefiniteness, and as covering a mere difference in degree. This is the origin of the following language, appearing at page 125 of defendants’ brief:

“This is vital, and of monetary importance in this litigation, as no decree for an accounting

Let us then, approaching the case from the point of view above set forth, see whether Wallace really advanced the art, and, if so, wherein his advance lay.

The Admitted Outstanding Facts.

There are certain vitally important outstanding facts which defendants-appellees either admit or do not deny, and which volumes of argument cannot change or obscure.

The first of these facts is that there was a very real problem in the paving art, the problem of providing a pavement which would have the stability and wear-resisting qualities of the widely used and valuable Warren pavement, and which yet would not require the repeated flush coatings which the Warren pavement required and which were its one draw-back. Warren himself had attacked this problem and failed to solve it (the New Bedford experiment. See our main brief page 13).

Wallace solved this problem. By the expedient of blending his thin upper course of fine surfacing into the coarse-to-fine mixture below by rolling it in while the lower course was still uncompacted and plastic, he provided a permanent seal-coat on a pavement of which the body was stable and enduring like Warrens. "*It is true,*" defendants' brief ad-

to guide a master can be framed without deciding at what point of rolling the prior art is departed from and the Wallace patent is entered upon."

This language is a mere paraphrase of the language of the *Eibel* decision in the First Circuit, now reversed by the Supreme Court, which appears at 274 Fed. 550.

mits at page 9 “*that the blending and merging of the fine material into the previously laid body mixture, as prescribed in the Wallace patent, necessarily binds or ties the two mixtures inseparably*”:

Defendants cannot and do not deny the efficacy of Wallace’s blending as a solution of the problem. He did away with the reflush-coating nuisance, with the result that the Wallace pavement is now being laid to a much greater extent than the Warren pavement, and at the time of the trial eighteen million square yards of Wallace pavement, or more than two thousand miles of road-way of normal fifteen-foot width, was in use. There is no denial of the facts proved by the testimony of such witnesses as Ashley and Courtade (see our main brief page 18) that the union of the fine surfacing to the body of the pavement in the Wallace structure has proved in practise to be permanent, and has decreased the repair expense to almost nothing even in pavements laid as much as ten years ago.

Nor can it be denied that Fresno county laid sixty miles of this pavement (Type B) under License from Warren Brothers Company, which both parties at least supposed was in conformity to the Wallace patent, and which defendants and plaintiff alike at the trial of this case treated as being the pavement of the Wallace patent. *Infra*, pp. 15-18.

Finally, the specifications under which the Blackstone Ave. pavement was laid and the actual process of laying it differed from the specifications for and the process of laying the sixty miles of Type B only in the colorable trivial rolling which

the defendants gave to the lower course before applying the surfacing, and which they took great pains to follow up by the instant laying of the fine surfacing, so that the two courses might be compressed together while the lower course was still very hot and plastic, and therefore capable of further motion and compression. As might be expected, this nominal and unsubstantial change produced no discernible difference in the product and defendants' brief only faintly argues, as it seems to us, that there is any difference between the Type A and the Type B samples, taking refuge instead in the remark that the samples are "confusing." Defendants' brief says:

"We ask the Court to avoid falling into a misapprehension of the issues in this case merely because a comparison by the eye of Type A and Type B specimens submitted by appellant is *somewhat confusing*. The issues in this case cannot be determined on superficial observances of that kind because the only invention made by Wallace was extremely narrow and minute and is not truly reflected in Type B pavement." (Defendants brief page 137.)

What Was Wallace's Real Step Forward?

There was no novelty in a coarse-to-fine mixture, whether carefully graded or "crusher-run." Such a graded mixture had been used for years in the Warren pavements, and infringers of the Warren patent had used "crusher-run" instead of a graded aggre-

gate in the hope of avoiding the Warren claims, and it had been held that the two mixtures were equivalent. (*Warren Bros. Co. vs. City of New York*, 187 Fed. 831, *infra*, p. 23.)

Nor was there any novelty in a layer of fine mixture used as a surfacing. Such a mixture had even been laid in a thin layer on top of a thick layer of coarse mixture below. (See, for example, the Mallette patent 691,708 and the Warren patent 675,430 discussed at pages 76 and 77 of our main brief). But the trouble was that the surfacing layers in these pavements did not last. They scaled off and ruined the pavement, as Warren Brothers Company had, to their sorrow, learned in New Bedford. They were laid only after the lower course had been thoroughly compacted and cooled.

The sole novelty of Wallace lay in the fact that *he blended, amalgamated and merged these two courses into one compact integral mass by the physical intermingling of their elements, and thereby made a permanent, inseparable union between them.* The upper thin layer, instead of breaking up and scaling off under traffic strains, transmitted those strains to the stable lower course, and *endured*, to provide a permanent water proofing seal coat for the pavement and to protect the coarse pieces of stone below from being fractured by direct contact with traffic. This may seem a simple change, but *it solved the difficulty. It succeeded where other efforts to seal-coat the Warren pavement permanently had failed.* However simple an improvement

may seem if it makes a read advance, if it marks the difference between failure and success, it is entitled to be regarded as invention and the inventor is entitled to patent protection.

Barbed Wire Patent Case, 143 U. S. 275.

It is clear, then, that Wallace's real invention lay in the *blending* of his thin upper fine mixture course to his coarse-to-fine lower course, and that his patent should be so construed, if it reasonably can be, as to protect that invention. *Nor does it make any difference as to the exact process by which this blending is obtained*, whether by the method set forth in the patent, in which the lower course is not rolled at all prior to the application of the upper course, or by the alternative method used by defendant in which the lower course is rolled partially, but not to full compression, and the upper course is applied while the lower course is still very hot and plastic and its elements free to move and readjust themselves under the final heavy, thorough rolling.

Do Defendants Get Wallace's Blend?

On this, the controlling question in the case, we submit that there can be but one answer. Certainly they do.

There is *no material difference* between the samples representing the Blackstone Ave. pavement, for example Plffs. Exhibits 16, 17, 30-35 inclusive and Dfts. Ex. F, and samples of Type B pavement which were admittedly laid with no rolling at all of the lower course prior to the application of the upper course, for example Plffs. Exhibits 42-48 inc.

Blending Contrasted With Surface Adhesion.

Defendants claim that they get only a *surface adhesion*, or “soldering” of their two courses, due to the sticking of the surface asphalt in the two courses respectively. They point to the adhesion in sheet asphalt between the wearing surface and the binder course, and to the adhesion in their own pavement between the lower course and the asphaltic concrete base on which it is laid, and say that this is the same thing as the adhesion between their top surfacing layer and their coarse-to-fine “binder-course” They point out that in the sheet asphalt the binder course was thoroughly compressed and cold before the wearing surface was laid (which is true) and that the asphaltic base of their pavement is likewise thoroughly compressed and cold before their “binder course” is laid, which is also true. Defendants say that in these cases, just as in the case of the union between their top surfacing and their “binder course” the line of juncture between the two layers is irregular and ill-defined. (Dfts. Brief, pp. 101-103.)

But note the difference between the nature of the union in the case of the sheet asphalt binder course and in defendants’ base on the one hand, and the union in the case of defendants’ top surfacing and their “binder course” on the other hand. Nothing could be more striking than the demonstration provided by the actual samples in evidence themselves on this point.

In the sheet asphalt sample, Plffs. Ex. 11, the wearing surface has already begun to break away

from the binder course, showing a distinct and perfectly definite, though irregular, plane of cleavage. And in Defts. Ex. F, the sample of defendants' Blackstone Ave. pavement presented to the Court by defendants themselves, the base has been cleanly broken away so that no part of it adheres to the sample, thus showing that there is a perfectly definite line of cleavage between it and the pavement proper.

These are typical examples of mere surface adhesion.

But let the Court now try to break away the top surfacing from the "binder course" in any one of the specimens of defendants' pavement in evidence. It cannot be done, because here there is a true blend.

In the case of sheet asphalt and in the case of the base of defendants' pavement, surface adhesion is all that is required, because the body of the pavement above the line of union is designed and intended, of itself, to withstand the strain of traffic. The binder course in the sheet asphalt, like the base in defendants' pavement, is designed only to sustain and distribute vertical weight. But with a *thin* surfacing layer like that of Wallace and of defendants, which is not heavy enough of itself to withstand traffic strains, a blend is necessary so that strains may be transmitted to the body of the pavement below, otherwise the thin layer will scale off. Mere surface adhesion will not do here.

At the argument defendants' counsel attempted to avoid the effect of the demonstration afforded by their own Exhibit F of the absolute contrast between the union of the top surfacing layer with the "binder course" and that between the "binder course" and the removed base by asserting that a newspaper had been spread on the base under this sample before the pavement was laid, and that this was the reason why it had been possible so easily to remove the base. *There is no such evidence in the record, and we absolutely deny the allegation.* There is no trace of any newspaper in the sample and the whitish color in certain spots is obviously caused merely by the scratching of the stones with a chisel. Defendants' counsel, in the effort to convince the Court that his statement was based on the record, read to the Court certain testimony of plaintiff's witness Burdge (Rec., p. 365) in which Burdge testified that he had himself in a certain spot spread a piece of paper on the base before the pavement was laid "in order to make the sample come loose easily, you see, from the base." But *this testimony related not at all to any of defendants' samples, but only a sample taken by Burdge himself.* The attempt to distort the record on this point merely shows how forcibly defendants' counsel saw the disastrous effect of the demonstration afforded by Defts. Ex. F.

We repeat that the samples in evidence prove that defendant does get Wallace's blend.

*DEFENDANTS' ARGUMENT FOR NON-
INFRINGEMENT.*

We do not find in the defendants' brief any serious argument for the invalidity of the patent, although it is argued that if the patent is construed broadly enough to cover the defendants' pavement, it is invalid. The chief argument is the argument for non-infringement, which is summarized by defendants' brief under four heads at page 75, as follows;—

“(a) The lower or binder course of Type A is not made up of ‘large pieces of stone, smaller pieces of stone and stone dust,’ but is made up of a properly graded and proportioned Warren mixture of crushed stone, gravel, sand and dust.

“(b) The top course is not ‘blended with the coarse mixture at the top of the mass,’ but, as prescribed in the Type A specifications, in the completed pavement remains ‘at least one quarter inch in thickness.’

“(c) In lieu of ‘a compact rigid layer,’ Type A wearing surface is multi-layer, in that it consists of a binder course with a top finishing course superposed thereon.

“(d) Type A wearing surface is not ‘densest at the top,’ for the binder course is of uniform density throughout and of greater density than the top $\frac{1}{4}$ inch finishing course.”

Each of these propositions forms the text of a lengthy discussion and they are repeated in substantially similar terms at pages 143, 144 in the final summing up of the defendants' argument.

If, as we have shown Wallace's real advance in the art was the blending of his two courses, and if, as we have also shown, defendants obtain that blending, then none of these other arguments for non-infringement will be found, upon analysis, to be tenable.

We shall briefly comment on these several propositions under corresponding headings.

“(a) The lower or binder course of Type A is not made up of ‘large pieces of stone, smaller pieces of stone and stone dust,’ but is made up of a properly graded and proportioned Warren mixture of crushed stone, gravel, sand and dust.”

In other words, defendants say that their Type A pavement does not infringe because they employ a graded mixture such as is described in the Warren patent, 727,505, for their so-called lower or binder course, instead of using the ungraded crusher run, which Wallace describes as suitable for use in his lower course. They say that Wallace's patent is limited to a pavement in which the lower course is made up “of crusher run” material ungraded and that since in the Type A pavement the lower course is made up of a graded mineral aggregate, there is no infringement, and this regardless of the question whether defendants' two courses are blended together or not, and regardless of any other question in the case.

If this position is sound, then it follows that the Type B pavement, sixty miles of which was laid by Fresno county under license from Warren Brothers Co. and which was regarded by all the

witnesses in the case, including defendants' expert, Jensen, as an embodiment of the Wallace invention, was not, after all, such an embodiment, since in it the lower course was composed of *identically the same graded mineral aggregate which defendants use* for the lower course in their Type A pavement here in question, this part of the Type A specifications having been copied, word for word, from the Type B specifications. Defendants do not hesitate to adopt this conclusion, and their brief asserts at page 52, that

“Contrary to the assertion made in the brief for Plaintiff-Appellant, the fact is that the county of Fresno has never employed the Wallace invention of the patent in suit. The body of the wearing surface on the Fresno county high-way system (both Type A and Type B) has been prepared in accordance with Warren patent 727,505, employing the very mixture for which the Wallace patent is designed to furnish a cheap substitute.”

Indeed, defendants say that since “the Type B wearing surface does not employ the Wallace substitute for the Warren mixture,” “there is no evidence in the record that the wearing surface described in the patent in suit has ever been successfully employed.” (Defendants brief, page 54.)

This position, which is defendants' chief argument at the present time, as we read its brief, is not only unsound as a matter of construction of the patent, in that it mistakes an *incidental* purpose of

Wallace for the *essence* of his invention as defined in his claim, but *it is quite contrary both to the testimony of defendants expert Jensen and to the position taken by counsel for the defendants themselves at the trial.* It is an afterthought of defendants' counsel.

Let us first see what defendants' expert Jensen says.

At Rec. page 159, Jensen, who is defendants' patent expert, as well as their practical expert, and who described the patent in suit and the prior art in addition to testifying in his capacity of county surveyor under whose direction all the county pavements were laid, produced as Defendants' Exhibit A a specimen of Type B pavement which he described as "*A specimen of the construction or product obtained by following said specifications, Type B, viz., the Wallace patent in suit.*"

Also, after pointing out certain features of this sample which he said were objectionable, he continued at page 161;—

"I have found from my observation and supervision of the construction of approximately sixty miles of pavement by the aforesaid Wallace method, that the same presents certain serious, objectionable features," etc.

Again, specifying what these alleged defects were, he said at page 162;—

"I have found that in practice with pavement laid in accordance with aforesaid specifications, Type B (*viz., in accordance with the patent*) a ma-

terial percentage of such stones do so protrude” etc.*

This practical paving expert Jensen, then, who had made a thorough study of the patent and was interested to establish non-infringement, did not, from his study of the patent, gather the impression that Wallace intended to limit himself to a mixture in which ungraded “crusher-run” was used as distinguished from a graded Warren mixture, since this Type B pavement which he treats as an embodiment of the Wallace patent used the same graded Warren mixture as Type A.

Defendants’ brief apologizes for the variance between its present position and Mr. Jensen’s testimony, on the ground that “*Mr. Jensen was not in a position to legally construe the patent in suit and his unconsidered assumption is not controlling or*

*We have remarked in our main brief that Jensen did not observe any “objectionable features” in the Type B pavement until he had laid sixty miles of it, and not then until, the Warren patent having expired, he decided to try to avoid further royalties by getting up his Type A specifications. In spite of his talk about the Type B pavement being “inefficient,” the record does not show that any repairs have ever been necessary in all his sixty miles of it. As to the “protruding stones” we have shown in our main brief, page 58, that no more stones protrude in Type B than in Type A, that in neither case is it intended that any shall protrude, but that in each case irregularities occur in the process of laying which may bring the stones to the surface in particular spots. The photograph in evidence which is reproduced at Rec., p. 488, shows the two types of pavement, side by side, with no difference whatever in their surfaces.

binding upon this Court.” (Defendants’ brief page 133.)

To this we might reply that a patent speaks *to workers in the art* such as Mr. Jensen and *not to lawyers*, as the Courts have often said, and that the understanding which it conveys to such a man is of far more importance than the mere argument of an attorney. The assumption was not “unconsidered” either. It was made, not under cross-examination on the witness stand on the spur of the moment, but in the course of an elaborate and carefully worked out expert affidavit, undoubtedly prepared by Jensen in collaboration with defendants’ counsel and filed by defendants’ counsel.

Moreover we presume that defendants’ counsel, whatever they may say as to Mr. Jensen’s inability to “legally construe the patent” and his “unconsidered assumption,” would hardly speak in the same terms of their own statement, deliberately made in open court. Let us see what they said at the trial.

At Rec. page 277, we find defendants’ counsel in opening their case, stating their position as to the Wallace patent. In the second paragraph on this page, counsel describes Wallace’s lower course in the terminology used in the claims of the patent, and continues;—

“There we have, lying on the old base, *the same Warren binder of which plaintiff enjoyed a full monopoly and which is now free to the public,*” * * * etc.

“Now the patent does not specify particularly the proportions of that binder course, but it does specify on page 1, at lines 47 to 53, ‘stone of a size to pass through the interstices of a screen giving a stone, the largest of which is the maximum size desired, and this stone, together with smaller pieces of stone and comminuted stone or dust in the state that the whole run is discharged from the crusher,’ etc. *There they are referring again to the graded aggregate which was patented in the Warren patent.*”

In other words, at the trial, defendants’ counsel particularly and specifically argued and urged that the so-called “binder-course” covered by Wallace’s claims was *merely the old Warren mixture*, and that in his description of this course, Wallace was “*referring again to the graded aggregate, which is patented in the Warren patent.*”

And at the trial, defendants’ counsel had no more question than defendants’ expert Jensen that the Type B pavement was an embodiment of the Wallace patent. Thus, they said at Rec. page 283, in explaining how it happened that Fresno County called for bids on both Type A and Type B pavement;—

“We asked for bids on both Types, Types A and B—and we were entitled to ask for bids on Type B. If we wanted to we could have gone ahead and used Type B, *because Warren Brothers had filed their offer of a license.*”

Now, defendants’ counsel, reversing their previous position, urge and indeed make it the forefront of

their argument, that Wallace's description of his lower course in his claim does not include a graded aggregate like that of Warren, but is limited to something else, namely to ungraded "crusher-run" and that for this reason neither Type A nor Type B embody the patented construction.

Now of course we do not contend that defendants are compelled to stand by the position their counsel and experts took at the trial. If they think they can make a better argument by taking a contrary position, there is no legal reason why they are not at liberty to do so.

But the trouble is that their first position on the point was sound and their present contrary position is wholly untenable. Wallace in his claim *did* describe the materials of his lower course in terms broad enough to include the Warren graded aggregate.

The difficulty with defendants' present position is that it mistakes an *incident* of the Wallace patent for its essence. Wallace stated, and indeed emphasized, in his specification that by the use of his invention, it was possible to avoid grading the aggregate for the lower course, and that this would save expense and trouble, since he could then use "crusher-run."

But it is absurd to suppose that he thought his invention resided in the use of "crusher-run," or that he intended to confine himself to "crusher-run." Obviously the patent is not to be evaded merely by the expedient of putting materials coming from the crusher through a screen, and sorting and re-com-

binning them. Warren Brothers Company in their practical use of the Wallace invention have preferred to sacrifice the saving in expense which would be realized by using "crusher-run," in order to get a more uniform mixture, and the defendants are simply following their practice in this respect. That part of the Type A specifications referring to the lower course is copied *verbatim* from the Type B specifications prepared by the plaintiff.

It is to the *claims* that we must look for a definition of the invention, and the *claims* make no mention whatever of any distinction between graded material and "crusher-run" material, and are infringed, so far as this point is concerned, if the lower course contains the "large pieces of stone," the "smaller pieces of stone" and the "stone dust," whether or not they have been graded. The only essential thing about the lower course is that it shall include stone elements of varying sizes down to dust, so as to give it stability, and the essence of the invention is the blending to such a coarse-to-fine lower course, of a thin upper course of fine material.

Defendants, in support of their argument as to a distinction between "crusher-run" and their graded aggregate, argue that the "crusher-run" which Wallace contemplated has a large percentage of voids, that sand must be added if these voids are to be filled, and that Wallace's idea was to leave them unfilled, except at the top, where he uses fine mixture to fill them. Defendants' brief says, page 77, that

"The fact that the mixture B of the Wallace patent is merely the product of a rock crusher

and does not contain any sand, is a distinguishing characteristic of the Wallace invention which appellant attempts to becloud."

Defendants say that on the contrary they add sand to their aggregate in order to fill the voids throughout.

There are several quite false assumptions in this reasoning. In the first place "crusher run" material may be and often is, just as free from voids as a graded mixture covered by the Warren patent. It contains particles of all sizes down to dust, and the portion of the "crusher run" passing a ten-mesh screen is commonly known as "crusher sand." Wallace had no intention of excluding sand from his mixture, although he did contemplate using *less* sand than had been used in the commercial exploitation of the Warren pavement, as the record shows, pages 108, 122, 123. Warren, in the practical use of his invention, had found it desirable to use more than enough fine material in his mixture to get the greatest stability, so that the excess of fine material would be forced to the top. This was one of the methods by which it was attempted to protect the top of the stones and to avoid the necessity of flush coating (Rec. pages 122, 123). Wallace, by his method, avoids the use of this *excess* of sand, but *not by any means of all sand*. Careful reading of the passages in Wallace's specification to which defendants refer will show that this was his meaning.

Defendants, in their mixture, likewise avoid the use of this excess of sand in their lower course, and

get the desired results by applying and blending in their fine material at the top *just as Wallace does*. As a matter of fact, there is no evidence that defendants' lower course mixture includes any sand at all beyond that occurring in the ordinary "crusher run," much less that it includes that excess of sand which was used in the commercial practice of the Warren invention and which alone Wallace sought to avoid.

Defendants' brief, finding in the claim nothing whatever as to "crusher run," seizes upon the fact that the claim says that the lower course shall be "made up of large pieces of stone, smaller pieces of stone and stone dust" etc., and argues that this language

"does not specify (and thereby excludes) sand" because "*the phrase 'made up of,' like the term 'consists of' serves to indicate what is not, as well as what is, present in the mixture.*"

(Defendants' brief, page 76.)

The premise that sand is not included within this terminology is wrong, for sand is merely small sized particles of crushed or eroded stone. The art classifies as sand, materials passing a ten-mesh screen, whatever their source, and that part of the "crusher run" which passes a ten-mesh screen is commonly known as "crusher sand."

Moreover, the case cited by defendants' brief for the alleged principle of interpretation *holds the opposite of the proposition laid down by the defendants*. The case cited is *Hoskins Mfg. Co. vs. General Electric Co.*, 212 Fed. 422, 428. In that case, one claim in issue was for

“an electrical resistance element formed of a metal alloy consisting of nickel and chromium.” It was argued that this claim was not infringed because the defendant’s product included not only nickel and chromium *but also iron and manganese*. But *the court over-ruled the argument and held the claim infringed*.

The same argument as to a difference between “crusher run” material and the Warren graded aggregate now urged by defendants, was made and over-ruled in one of the suits on the Warren patent (*Warren Bros. Co. v. City of New York*, 187 Fed. 831.) In that case the defendant’s chief contention was that it did not infringe the Warren patent because it used “crusher run” instead of a screened and graded aggregate. The Court (Coxe J.), said, page 834:

“Of course the claims must be read in the light of the description, but it cannot be doubted that any one using the Warren pavement will infringe, *no matter how the pavement is produced*. * * * *If the mineral particles are of the indicated size it is immaterial whether they have passed through a sieve or not. We are dealing with a pavement, not the method of producing it.*”

The Court, after pointing out that “*the question is whether the patented pavement can be produced by the ordinary crusher run*” analyzed the evidence and concluded that it was so produced, and enjoined the defendant. In this decision, the Court of Appeals for the Second Circuit fully concurred (187 Fed. 835, 836).

This decision is absolutely pertinent to the present case.

We are sure that this Court will agree with us that there is nothing in the argument that the Wallace patent is not infringed merely because defendants grade their aggregate for the lower course instead of using "crusher run," and that the contrary position which defendants' counsel took at the trial was the correct one.

(b) and (c). The second and third propositions of defendants' as to infringement may be considered together. They are stated by defendant's brief as follows (Dfts. brief, p. 75);—

"(b) The top course is not "blended with the coarse mixture at the top of the mass," but, as prescribed in the Type A specifications, in the completed pavement remains "at least one-quarter inch in thickness."

"(c) In lieu of "a compact rigid layer," Type A wearing surface is multi-layer, in that it consists of a binder course with a top finishing course superposed thereon."

In so far as these propositions merely deny that there is any blending between the two courses of the defendants because they give their lower course a colorable initial rolling before applying the surface coating, we have already fully dealt with the matter in our main brief and above and have shown that the defendants do get this merger or blending of the two courses because the top surfacing is applied before the lower course has been given its ultimate compression and

while it is still plastic and hot; that the samples prove this; and that the only possible reason for the precautions set forth in the Type A specifications and so literally followed in the laying of the Type A pavement as to the laying of the surface coating immediately after the lower course has been given its "initial" rolling, and while it is still hot, is to get this blending. We have shown that defendants' departure from the prior art practice of laying a lower course, thoroughly compacting it and cooling it before laying an upper course, is explicable only upon the theory that they desire to obtain Wallace's blending. We need not here further amplify on this point.

But defendants' two propositions above laid down go further than this mere denial of the blending, and amount to the proposition that the patent is not infringed unless the surface coating is *completely crowded down into* the lower course, so that the stones of the lower course protrude to the very top of the mass. Defendants point to the fact that in their pavement there is, as they say, a one-quarter inch depth of the fine surfacing above any zone of merger or blending between the two layers, and argue that the existence of this one-quarter inch of fine material is enough to take defendants' pavement out from under the patent.

The language of the claim to which defendants' brief refers, "blended with the coarse mixture at the top of the mass," may well mean "at the top of the mass *of the coarse mixture*," in which case there would be no room whatever for defendants' argument.

But if it means "at the top of the whole pavement," still it is aptly descriptive of defendants' pavement, in which the blend occurs in the broad sense at the top of the pavement, though not at the immediate surface.

Moreover, a conclusive objection to the construction for which defendants contend is that *such a construction would exclude from the claims of the patent the pavement shown in the very drawing of the patent*, for this drawing shows a clear layer composed exclusively of the fine surfacing C at the immediate top with none of the coarse mixture therein, and just below it the zone of blending between the two courses.

Wallace's purpose would be defeated if the stones of the lower course projected to the immediate surface, so as to be exposed directly to the crushing effect of traffic. This was the reason why the Warren pavement had to be kept "flush-coated," and was the very condition which Wallace sought to remedy. It is essential to his result that his top surface be "sealed to the elements" (Wallace patent p. 1, line 100), which it would not be if the stones projected to the surface, and he particularly says, Wallace patent, p. 2, line 30, that his pavement "presents a smooth surface"; and as we have shown in our main brief, there is no difference in this respect between the Type A pavement and the Type B pavement, so many miles of which have been laid by the county of Fresno under license from Warren Brothers Company, and which was regarded by de-

fendants' expert and counsel at the trial as an embodiment of the Wallace patent.

The construction for which the defendants contend would exclude not only the Type B pavement from the scope of the claims, but also all the rest of the two thousand and more miles of Wallace pavement which have been laid under license from the plaintiff throughout the country, because in all this pavement there is a quarter-inch, more or less, of the fine mixture above the zone of blending. (See the typical specimen of Wallace pavement produced by Perkins as Plaintiff's Exhibit 10, which is shown in the photograph appearing at Rec. page 133.)

Defendants' brief at page 87 suggests a mental picture of two courses, the lower one red in color and the upper blue, and says in substance that the patent is not infringed unless all of the blue layer is merged into the red so as to produce a purple; whereas if the Type A binder course were red and the finishing course blue, there would be both blue and red strips, irrespective of whether there was or was not a purple strip intermediate between them. This argument is rebutted by the fact that if in the very drawing of the Wallace patent these courses were given the suggested colors, there would be not only the lower strip of red and the strip of purple at the zone of blending, but a thin strip of clear blue at the top.

Defendants' brief is, of course, entirely in error when it says as it does at p. 86, that "appellant does not deny that the Type A wearing surface is a multi-

layer surface." On the contrary, we maintain and have consistently maintained that the Type A pavement is not a multi-layer surface any more than that of Wallace is, the point being that in each case the two layers though separately laid are in the completed pavement merged or blended into *one integrally united mass*, as contrasted with a structure in which the two layers do not merge. It is this latter sort of structure, exemplified for example by sheet asphalt, that Wallace excludes from his patent when he says that his is not a "multi-layer" pavement.

(d) Defendants' fourth proposition is:

"(d) *Type A wearing surface is not 'densest at the top,' for the binder course is of uniform density throughout and of greater density than the top 1/4 inch finishing course.*"

We have already fully considered the question of what the patent means by "dense" in our main brief, and shown that throughout the specification the word is uniformly used in the sense of "impermeable" to water, and we need only add that the very same argument from the file-wrapper from which defendants' brief quotes, confirms this position, for in that argument Wallace said, in a passage which defendants' brief does *not* quote;

"The purpose of the finer upper course is * * * to form a coherent mass which when blended into close and intimate relation with a lower layer *effectually seals it to the action of the elements*" (Rec. p. 463).

That defendants' pavement is "densest at the top" in this, the sense in which the word is used in the Wallace patent, is fully proved and is not denied by the defendants. Defendants' brief says, page 99, that "It is not necessary to dispute that fact because it is totally irrelevant," and proceeds to show the "irrelevance" by a labored argument based *not on the Wallace patent in suit, but on other patents*. But, as defendants properly said in their brief in the District Court (p. 70 to 71):

"It is a settled rule of patent law that in interpreting the meaning of a term in a patent claim, the court will not adopt a dictionary definition, but will determine the meaning from the specifications of the patent. The question of interpretation resolves itself down to what did the patentee mean by the term, and not what is a proper dictionary definition of the term."

It is equally irrelevant to inquire what other patents mean by a particular term when the patent in suit makes it clear what the patentee means by it.

If defendants were right in their view that "densest" as used by Wallace means "having the least percentage of voids," or "having the greatest specific gravity," then it would follow that the Type B pavement which was laid under the plaintiff's license and which both parties considered to be an embodiment of the patent until defendant's counsel began to write their briefs, was in fact not within the patent, for the same argument could be

made as to Type B that defendants make as to Type A in this regard.

DEFENDANTS' EXPLANATION AS TO WHY THE TOP COURSE OF ITS PAVEMENT IS APPLIED WHILE THE LOWER COURSE IS HOT.

If defendant is to make good its claim that it does not desire and does not get Wallace's blending of its two courses, it must, naturally, convince the Court that it has *some other valid reason for going to all the expense and trouble necessary to insure that the surfacing layer shall be laid and rolled while the lower course is still hot and plastic*, instead of using the more convenient and easier method of the prior art. This we pointed out in our main brief, and we also showed that the only reason suggested by the defendants in the record for their procedure was the palpably absurd one advanced by Jensen that

“the reason for immediately laying course C is *to prevent the binder course from being soiled or injured by traffic or otherwise*” (Rec. page 177).

Defendants' counsel realize that this attempt at explanation will not suffice, and make no reference whatever to it in their brief. Instead they invent a new reason of their own. They say that by laying the surfacing while the lower course is hot, defendants get a “*soldering*” of the top course to the lower course. Defendants' brief says, page 107, that

“if the asphalt content of the lower course be hot at the time the upper course is applied, this more readily and effectively produces a soldering of the top course to the binder course
 * * * In having the asphalt of the lower course heated at the time the upper course is applied, a coalescing of the asphalt content of the two courses is secured and an effective soldering action accomplished.”

At least, then, defendants now admit that their immediate laying of the upper course while the lower course is hot has *something to do with getting a better union between the two courses*, and Jensen's lame explanation about preventing “soiling by traffic or otherwise” goes by the board.

But defendants' brief talks about “soldering,” so as to give the idea that *a mere surface adhesion of the asphaltic content of the two layers* is all that defendants desire, and that *this surface adhesion is aided by having the lower course hot when the upper course is applied*. This is *pure invention on the part of defendants' counsel*. There is not a word in the record to support it. As a matter of fact the heat of the upper course when laid would be sufficient to melt the surface asphalt of the lower course if it were stone-cold; so that if all that defendants desire is surface adhesion, all they need to do is to follow the prior art practice. There is no need whatever of their taking such pains to have their lower course at a temperature of about 300 F when their upper course is laid and rolled in.

Mr. Jensen, in an unguarded moment, made an admission which is really fatal to defendants' contention. He said (Rec. p. 177);—

“As a matter of fact it is not necessary to immediately spread the finishing course after laying the binder course, *except in the case of the Wallace method*, wherein the binder course is not rolled and *a complete blending of the two courses is required.*”

Now we may safely assume that defendants are not foolish enough to do something which means added expense and inconvenience, and moreover, *involves them in a patent suit* unless it is necessary for their purposes; and therefor that the immediate spreading of the finishing course, after laying the binder course, *is in fact necessary* to the attainment of the results they desire. If so, it must be, as Jensen says in the passage above quoted, because in their construction, as in Wallace's, “*a complete blending of the two courses is required.*”

Defendants' procedure proves that their purpose is to get a blending of their two courses, and the samples of their pavement in evidence prove that they do get that blending.

DEFENDANTS ENDEAVOR TO INJECT NEW PRIOR ART INTO THE CASE UNDER GUISE OF REFERENCE TO COURT DECISIONS.

The patent statute carefully provides that a defendant shall set up in his answer the prior art which he is to offer in evidence as anticipation, and when an answer sets up a large number of prior

patents the courts often require the defendant by a bill of particulars, to name those on which he intends to rely at the trial, all to the end that the plaintiff shall have proper opportunity to examine and present evidence regarding them. Prior patents not so pleaded are, on elementary principles of justice, excluded from evidence at the trial.

The defendants in this case, evidently not satisfied with any or all of the 13 patents of the prior art which they put in evidence at the trial, or the other 61 patents which they cited in their answer but did not offer in evidence, now *on this appeal for the first time*, attempt to inject into the case two additional patents not even included in their answer and much less offered in evidence at the trial, namely, a certain patent to one Perkins and a French patent to one Crochet. See defendants' brief pages 108-113. They do this under guise of *quotations from opinions of the Supreme Court and other courts* in cases in which the Perkins patent was in suit and the Crochet patent was set up as an anticipation. Defendants quote from these patents, quote other publications referred to in the court opinions, and even quote testimony given by witnesses in those cases (Defendants' brief pages 109, 110, 111, 112, 113), and contend that these patents and publications show that the "soldering action" which they claim is what they get "*was a principle well known and resorted to in the paving industry long prior to any invention of Wallace*" (Defendants' brief, p. 108).

In so far as these court decisions set forth principles of law, defendants are of course entitled to quote from and rely upon them; but *very decidedly they are not entitled to rely upon any patents or publications referred to in those opinions as evidence of what was or was not "a principle well known and resorted to in the paving industry long prior to any invention of Wallace."*

It is just as improper for the defendants to argue, or for the Court to consider, as prior art in this case, the patents and publications referred to in the opinions from which defendants' brief quotes, as it would be for defendants to argue or for the Court to consider any other patent or publication now injected into the case for the first time, as to which the plaintiff had no opportunity to present evidence. It makes no difference at all that they happen to be quoted in a Supreme Court opinion.

The Court should therefore refuse to consider these patents and publications in any way.

Since, however, they, or extracts from them, are printed in defendants' brief, we wish to indicate what we should have proved regarding them had they been put in evidence by defendant.

The Perkins patent related to a method of repairing sheet asphalt pavements which consisted in applying a flame to the spot or area to be repaired and to the surrounding edges, which treatment, according to the patent, reduced the surface asphalt to the soft, pliable state in which it was originally laid; and thereafter adding the new repair material, whereby, according to the patent, any demarcation

or division line between the repair and the old pavement was avoided.

Had this patent been put in evidence at the trial, we should have proved that although the process had some little commercial use, it was long since discarded as a failure, and that it did not, in fact, make a permanent union between the repair patch and the original pavement, the patch soon scaling off. The reasons for the failure of the process were two-fold; in the first place, it was found in practice that the flame only heated the immediate surface and did not make the *body* of the pavement plastic; and, in the second place, the patch and the original pavement were, both alike, a fine sand sheet asphalt mixture. Either of these two reasons was enough to prevent anything more than a mere surface adhesion between the patch and the original pavement. There was no effective blend.

The distinctions between this Perkins patching process on the one hand, and Wallace and defendants' Type A pavement on the other, are clear and distinct.

In Wallace and in the Type A pavement, we are dealing not with a matter of patching of sheet asphalt pavement, but of laying an entirely new pavement in which the body is made up of a coarse-to-fine mixture adapted to give rigidity to the structure and to bear the strains of traffic, and which has, permanently ingrafted at its top, a thin surfacing of fine material, so thin as to be of itself incapable of withstanding traffic strains, but capable of transmitting them to the body of the pavement because of

its blending therewith, and which has the function of cushioning the tops of the stones of the coarse mixture and sealing the pavement against the entrance of water. The permanent blending of these two layers together is made possible because one of them is made up of *coarse particles* which have crevices between them and change position under the kneading action of the roller, and because the lower course is plastic throughout its depth, and either uncompressed at all, or only partially compressed as in defendants' Type A, at the time when the upper course is applied and rolled in.

The Perkins patent shows not the faintest conception of any such structure, and even in his patching he got no true blend, because his conditions and his materials were not such as to make a blend possible.

The Crochet French patent is no more pertinent than the Perkins patent. In fact, the holding in the cases from which defendants' brief quotes was that the Perkins patent was invalid because Crochet had described the same thing before him. We mention these patents, although they are not entitled to any consideration whatever, because if the Court reads what defendants' brief has to say about them, we wish it to know what the answer would have been if they had been offered in evidence.

Defendants' Argument as to "Difference in Degree."

Defendants' brief many times refers to the file-wrapper, pointing out that Wallace's attorney argued to the Patent Office that it was essential to

Wallace's process that the fine surfacing should be placed on the lower course before the lower course was rolled. We have pointed out in our main brief (pp. 45-47, 83-89) that analysis of the file-wrapper shows that there was never any material change in claim 2, that under established principles of law mere file-wrapper arguments unaccompanied by amendments of claims are immaterial, and that, moreover, most of these arguments related to the Wallace *process*, for which he was seeking claims, and not to the *product*, to which the patent as ultimately allowed is limited. But the simple and obvious answer is that the rolling which Wallace said would defeat his ends was a *regular normal rolling*—the rolling customary and universal in the paving art, which was always continued until a course was fully compacted, cold and unyielding. It is absurd to suppose that Wallace's attorney meant to say that *any rolling at all*, however nominal, would defeat his objects. Did he mean, for example, that passing over the surface once with an ordinary hand roller would defeat his ends? Obviously not.

But, defendant's brief urges, in reply to this suggestion, then the patent covers merely a *difference in degree*. If the patent covers a product in which *some* rolling is done, but not *complete* rolling to unyielding compactness, where is the line to be drawn?

Such arguments are familiar to the courts. They are regularly made by infringers. The answer is that differences in degree finally become

differences in kind, and the line is to be drawn *at the point where a practical difference in result is obtained*. Does the defendant roll to such an extent that the lower course becomes so compact and unyielding that no further substantial movement of its elements is possible so that there can be no physical intermingling therewith of the materials of the upper course? If so there is no blend, and no infringement. But defendants carefully stop their rolling far short of this point, so as to get a blend, and the samples prove that they do get a blend.

In *Haddock vs. Haddock*, 201 U. S. 562, 631, Mr. Justice Holmes put the matter well when he said:

“I have heard it suggested that the difference is one of degree. I am the last man in the world to quarrel with a distinction, simply because it is one of degree. Most distinctions, in my opinion, are of that sort, and are none the worse for it.”

And the learned Justice proceeded to remark, in substance (p. 632), that it is hard to draw the line where day ends and night begins, but that there is no doubt that the two are different.

Similarly, in the recent *Eibel Process Case*, 261 U. S. 45, above referred to, the evidence showed that wires in paper machines had been downwardly pitched as much as 3 inches in prior art machines. Eibel disclosed a downward pitch of about 12 inches, and his claims covered a “substantial” pitch. The same argument was made there as here, that the claims covered a mere difference in degree and were void for indefiniteness. But the Court

overruled the contention, saying, through Taft, C. J., p. 58, that by his high pitch Eibel accomplished *a different purpose* than was obtained by the small pitches of the prior art and p. 65 that workers in the art had no difficulty in determining what pitch was necessary to accomplish Eibel's purpose. Similarly in the present case workers in the art know that a real rolling implies compacting a course until it is rigid and unyielding, and know that a mere partial rolling, leaving the lower course plastic and its particles free to readjust themselves will not prevent a blend.

Defendants' brief (p. 106), asserts that their lower course is fully consolidated before the surfacing is applied and that "there is no evidence to the contrary."

Of course this is erroneous. We refer to the testimony cited in our main brief at pages 31, 32. The photographs taken on the work show cavities throughout the surface and even show *marks of the roller wheels* after the defendants' rolling had been done on it. See, for example, Plffs. Ex. 41, Rec. p. 499, and Plffs. Ex. 26, Rec. p. 493.

Defendants' brief misquotes the testimony of plaintiff's witness Burdge (Defts. Brief, p. 66), by saying that at Rec. p. 367, he said that defendants lower course was approximately an inch and a quarter thick "after its individual compression," and that he said at Rec. p. 382 that after the pavement had received its final compression, the lower course "still remained an inch and a quarter thick." Reference to the record will show that

Burdge did not say in the passage first referred to that the course was $1\frac{1}{4}$ inches thick after its *individual* compression. In both cases he was referring to its thickness after the final completion of the pavement. For Burdge's testimony as to the condition of the lower course after its "individual" compression, see our main brief, p. 31.

Miscellaneous Comments on Defendants' Brief.

We cannot undertake here to correct all the errors in defendants' brief or to answer all the fallacious arguments therein contained. We have already trespassed too long on the Court's patience.

There are, however, one or two further points to which we wish to make brief reference.

Defendants' brief attempts to avoid the pertinent question why, if they do not wish a blend, they go to the additional expense and inconvenience of preparing and hauling to the work two different kinds of mixtures, both hot, at the same time, instead of first laying and completing the lower course, then changing their mixture and laying the upper course, in accordance with prior art methods (see our main brief, pp. 32-34), by remarking (Dfts. Brief, p. 107), that Wallace in his patent states as one of the advantages of his construction that it can be laid at small cost. To this rather inconsequential suggestion we might reply by the perhaps equally inconsequential answer that the patentee who does not claim that his invention saves expense is a poor advertiser. As a matter of curiosity we took the pains to look through the pavement patents set up in defendants' answer in this case to find how many

of them made similar claims as to saving of expense by their products and find that twenty-two of them do! But in Wallace's case there is a real foundation for the claim if one uses crusher run as Wallace prefers to do, for thereby the expense of grading is saved. Defendants, like the plaintiff, prefer to undergo this expense in order to get a more uniform product.

Defendants' brief (p. 115 et seq.), points out that Wallace's patent does not say that his lower course must be hot at the time the upper is applied, and argues that therefore it follows either that the patent does not give sufficient instructions as to how to make the product, or that it involved no invention in view of the prior art to apply and roll in the surfacing while the lower course is hot, as defendants do.

We have already dealt with this supposed dilemma at page 43 of our main brief but we wish to add here, that anyone reading Wallace's disclosure would necessarily understand that the lower course must be plastic at the time the upper course is laid since it is thereafter to be compressed, and that this plasticity may be obtained either by having the course hot or by using an asphalt mixed with a solvent which keeps the asphalt soft at normal temperatures until the solvent evaporates. Given Wallace's idea of the blend, it was obvious that the lower course must be plastic when the surfacing was applied in order to obtain the blend, and the means of keeping it plastic were familiar to every one. But the *idea of the blend* was not obvious. Everyone, prior to

Wallace, had always compacted and cooled a lower course before applying an upper course in laying pavements.

Conclusion.

The decision of this Court in the Hassam Paving Case (*Consolidated Contract Co. vs. Hassam Paving Co.*, 227 Fed. 436, 439), is closely in point in the present case. There the subject matter of the patents in suit was a Portland cement concrete pavement. It was old to lay a layer of crushed stone, roll it, and then "grout" it by pouring cement over the stone to fill the crevices. The sole improvement over this prior practice embodied in the second patent in suit (Hassam, 625, 851) lay in the fact that Hassam continued the rolling during and after the grouting was added (pp. 438, 440). Yet, though the idea was simple, the patent was sustained because Hassam made a real advance in the art and his elements "coacted with each other in a new and unitary organization so as to produce a more beneficial result than by their separate operation" (227 Fed. 439).*

*Incidentally we note that defendants' brief (p. 105) mentions one of the Hassam patents involved in the Hassam case (No. 861,650), in support of its argument that Wallace's patent is invalid if construed in such a way as to include defendants' pavement. We have in our main brief, p. 74, shown the irrelevance of this patent to Wallace's invention, but may add here that in the Hassam case the Court properly treated pavements depending on grouting with Portland cement as quite distinct from pavements of the bituminous type such as Wallace's is. The Court dismissed one of the War-

So in the present case there was no novelty in Wallace's elements taken separately. His lower course was old, his upper course was old and it was old to place one on the other. But his *blending* was new, and by it he was able to combine into one integral mass two different kinds of mixture, having respectively different properties, in such a way that the two combined to make a structure that had all the stability and durability of the Warren pavement and, in addition, was permanently water-proofed. This was a new and useful result, never before obtained, and it is what the defendants have, just as fully in Type A as in Type B. The patent is for a product, however obtained, and is not to be avoided by trivial variations in the process.

The simpler an invention, the easier it is to make up a plausible argument for noninvention, but the courts have often held that simplicity is often the best argument for invention. Plausible arguments for noninfringement can usually be advanced by infringers, but as the Supreme Court said in the *Eibel* case the Court looks first at the real advance in the art made by the patentee and construes the claims accordingly.

Defendants say that plaintiff is trying to extend the monopoly which it enjoyed under the Warren patent. Defendants are at full liberty to use the Warren patent and everything disclosed therein freely. But they prefer to stand a patent suit be-

ren patents which was cited against Hassam with the remark that in it "no grouting whatever is used" (227 Fed. 441).

cause they want something more—namely, the improved resistance against the elements and against the wear of traffic which Wallace showed them how to get, and which they have used to the extent of 60 miles of pavement under plaintiff's license.

Respectfully submitted,

J. M. HEAD,

HARRISON F. LYMAN,

Of Counsel for Plaintiff-Appellant.

PAUL S. HONBERGER,

O. L. EVERTS,

Solicitors for Plaintiff-Appellant.